



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,716	10/17/2003	Michael John Williams	450110-04801	2209
22850	7590	08/16/2006	EXAMINER	
C. IRVIN MCCLELLAND OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			RAYYAN, SUSAN F	
			ART UNIT	PAPER NUMBER
			2167	

DATE MAILED: 08/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/688,716

Applicant(s)

WILLIAMS ET AL.

Examiner

Susan F. Rayyan

Art Unit

2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 14-22 and 26-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 23-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/17/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of species of claims 1 - 13 and 23 - 25 in the reply filed on July 7, 2006 is acknowledged. The traversal is on the ground(s) that the claims appear to be part of an overlapping search area and searching of these two groups would not place a serious burden on the Examiner. This is not found persuasive because group I, claims 1-13,23-35, drawn to an audio/video generation apparatus is classified in class 382, subclass 276 and group II, claims 14-22, drawn to a data structure is classified in class 707, subclass 102. Group I and group II are classified into different class/subclass which require separate searches. The examination of both groups places a serious burden on the Examiner.

Because these inventions are distinct for the reasons given above, in the Election Requirement dated June 7, 2006 and the search required for group I is not required for group II, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above, the Election Requirement dated June 7, 2006 and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes is proper.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 1-13, 23-35 are currently pending. Claims 14-22 are withdrawn.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1-9, 23, 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1, 23, 31, the phrase "and/or" renders the claim(s) indefinite because it is unclear as to the combination of elements included.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

the claimed invention is directed to non-statutory subject matter.

Claims 1 – 13, 23-35 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

MPEP 2106 IV.B.2. (b) A claim that requires one or more acts to be performed defines a process. However, not all processes are statutory under 35 U.S.C. 101. Schrader, 22 F.3d at 296, 30 USPQ2d at 1460. To be statutory, a claimed computer-related process must either: (A) result in a physical transformation outside the computer for which a practical application is either disclosed in the specification or would have been known to a skilled artisan, or (B) be limited to a practical application.

Claims 1, 9,10,13 in view of the above cited MPEP sections, are not statutory because they merely recite a number of computing steps without producing any tangible result and/or being limited to a practical application.

Claims 1,9 teach “an audio and/or video generation device operable to generate audio and/or video material” and “ a metadata generation processor ... to generate a reference value providing quasi-unique reference”. The claim does not provide a concrete result but merely provides a computing step to generate a reference value. The claim does not provide a tangible change to the data such as displaying the change to the user or storing the change.

Claims 10,13 teach “a reference value generator operable to generate a quasi-unique reference to the audio/video material with a reduced amount of data than the audio/video material”. The claim does not provide a tangible result but merely provides a computing step to generate a quasi-unique value. The claim does not, for example, store the data or display the data to the user.

Information Disclosure Statement

5. The information disclosure statement (IDS) submitted on October 17, 2003 was filed before First Office Action. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1,3-7,9-11,13,27, 29-30,32-35 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent Application Publication 2004/0001631 A1 issued to Frane J. Camara et al (“Camara”).

As per independent claim 1 Camara anticipates:

an audio and/or video generation device operable to generate audio and/or video material (paragraph 13, lines 7-9, paragraph 38, lines 10-18: live camera feeds and streaming data), and a metadata generation processor operable to generate metadata describing the content and/or attributes of the audio/video material (paragraph 13, lines 1-4 and Figure 3, generating meta data), wherein the metadata generation processor is operable to generate a reference value providing a quasi-unique reference to the audio/video material with a reduced amount of data than the audio/video material itself, the reference value being generated from data values representing the audio/video material in accordance with a predetermined relationship (paragraph 35 and 53, set of algorithms for generating metadata describing image files, rendering a characteristic

value).

As per claim 3 same as claim argument above and Camara anticipates:
comprising a communications processor operable to communicate the metadata separately from said audio/video material (paragraph 41, lines 1-7, receiving image information, paragraph 47, metadata stored separately).

As per claim 4 same as claim argument above and Camara anticipates:
comprising a data carrier, the audio/video generation device being operable to store the audio/video material on the data carrier (paragraph 25, images stored as a set of files on camera).

As per claim 5 same as claim argument above and Camara anticipates:
comprising a second data carrier, the metadata generation processor being operable to store the metadata on the second data carrier (paragraph 32, lines 1-12, store metadata on the local computer).

As per claim 6 same as claim argument above and Camara anticipates:
wherein the predetermined relationship provides the data values of parts of the audio/video material from which the quasi-unique reference is generated (paragraph 55 lines 1-5).

Art Unit: 2167

As per claim 7 same as claim argument above and Camara anticipates:

wherein the predetermined relationship identifies pixels within a frame or a plurality of frames of the video material, the values of which pixels are used to generate the quasi-unique reference value (paragraph 51-52, image file delimiters and pixels and paragraph 35, characteristic value generated equates to the quasi-unique reference value).

As per claim 9 same as claim argument above and Camara anticipates:

wherein the metadata generation processor forms at least part of a camera utility device releasably attached to the camera (paragraph 38, lines 10-23).

As per independent claim 10 Camara anticipates:

A metadata generation processor operable to generate metadata describing the content or attributes of audio/video material (paragraph 13, lines 1-4 and Figure 3, generating meta data), the processor comprising a reference value generator operable to generate a quasi-unique reference to the audio/video material with a reduced amount of data than the audio/video material(paragraph 13, lines 1-4 and Figure 3, generating meta data),, the reference value being generated from data values representing the audio/video material(paragraph 35 and 53, set of algorithms for generating metadata describing image files , rendering a characteristic value).

Art Unit: 2167

As per claim 11 same as claim argument above and Camara anticipates:

comprising a data store for storing the metadata, the quasi-unique reference value being stored in the data store in association with the metadata describing the audio/video material from which the quasi-unique reference was generated (paragraph 32 and paragraph 35 and 53, set of algorithms for generating metadata describing image files , rendering a characteristic value).

Claim 13 is rejected based on the same rationale as claim 10.

As per independent claim 27 Camara anticipates:

generating audio and/or video material, generating metadata describing the audio/video material(paragraph 13, lines 7-9, paragraph 38, lines 10-18: live camera feeds and streaming data), including generating a reference value providing a quasi-unique reference to the audio/video material with a reduced amount of data than the audio/video material, the reference value being generated from data values representing predetermined parts of the audio/video material in accordance with a predetermined relationship(paragraph 35 and 53, set of algorithms for generating metadata describing image files , rendering a characteristic value), and storing the quasi-unique reference value in association with the metadata describing the audio/video material from which audio/video material the quasi-unique reference was generated (paragraph 32).

Art Unit: 2167

As per claim 29 same as claim argument above and Camara anticipates:
comprising communicating the metadata separately from the audio/video material(paragraph 41, lines 1-7, receiving image information, paragraph 47, metadata stored separately).

As per claim 30 same as claim argument above and Camara anticipates:
comprising storing the audio/video material on a first data carrier and storing the metadata on a second data carrier (paragraph 25, images stored as a set of files on camera and paragraph 32, lines 1-12, store metadata on the local computer).

Claim 32 is rejected based on the same rationale as claim 1.

Claim 33 is rejected based on the same rationale as claim 27.

Claim 34 is rejected based on the same rationale as claim 32.

Claim 35 is rejected based on the same rationale as claim 33.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2,12,28 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication 2004/0001631 A1 issued to Frane J. Camara et al ("Camara") in view of US Patent Number 6,278,791 issued to Chris W. Honsinger et al ("Honsinger").

As per claim 2 same as claim argument above and Camara does not explicitly teach wherein the metadata generation processor includes a hashing processor operable to generate the quasi-unique reference from the audio/video material, the quasi-unique reference being a hash value. Honsinger does teach this limitation at column 1, lines 39-42 to verify an image has not been modified since the hash was generated (column 1, lines 54-56). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Camara with hashing processor operable to generate the quasi-unique reference from the audio/video material, the quasi-unique reference being a hash value to verify an image has not been modified since the hash was generated (column 1, lines 54-56).

Art Unit: 2167

As per claim 12 same as claim argument above and Camara does not explicitly teach a hashing processor operable to generate the quasi-unique reference from the audio/video material, the quasi-unique reference being a hash value. Honsinger does teach this limitation at column 1, lines 39-42 to verify an image has not been modified since the hash was generated (column 1, lines 54-56). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Camara with a hashing processor operable to generate the quasi-unique reference from the audio/video material, the quasi-unique reference being a hash value to verify an image has not been modified since the hash was generated (column 1, lines 54-56).

As per claim 28 same as claim argument above and Camara does not explicitly teach wherein the quasi-unique reference from the audio/video material, the quasi-unique reference being a hash value. Honsinger does teach this limitation at column 1, lines 39-42 to verify an image has not been modified since the hash was generated (column 1, lines 54-56). It would have been obvious to one of ordinary skill in the art at the time of the invention with wherein the quasi-unique reference from the audio/video material, the quasi-unique reference being a hash value to modify Camara to verify an image has not been modified since the hash was generated (column 1, lines 54-56).

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication 2004/0001631 A1 issued to Frane J. Camara et al ("Camara") in view of US Patent Number 7,043,048 issued to Eric E. Ellington ("Ellington").

As per claim 8 same as claim argument above and Camara does not explicitly teach: wherein the metadata is represented as a data structure describing the content of at least one shot or sub-shot of audio/video material, the data structure comprising a volume identification defining the data carrier on which the audio/video material is represented, at least one shot identification defining the at least one shot or sub-shot within the audio/video material, and the quasi-unique reference value generated from the audio/video data within the shot or sub-shot. Ellington does teach wherein the metadata is represented as a data structure describing the content of at least one shot or sub-shot of audio/video material, the data structure comprising a volume identification defining the data carrier on which the audio/video material is represented(column 4, lines 37-45), at least one shot identification defining the at least one shot or sub-shot within the audio/video material, and the quasi-unique reference value generated from the audio/video data within the shot or sub-shot(column 5, lines 7-17, image hash) to determine if an image has been altered at column 5, lines 53-54. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Camara with wherein the metadata is represented as a data structure describing the content of at least one shot or sub-shot of audio/video material, the data structure comprising a

Art Unit: 2167

volume identification defining the data carrier on which the audio/video material is represented, at least one shot identification defining the at least one shot or sub-shot within the audio/video material, and the quasi-unique reference value generated from the audio/video data within the shot or sub-shot to determine if an image has been altered at column 5, lines 53-54.

Claims 23-25,31 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Number 7,043,048 issued to Eric E. Ellington ("Ellington") in view of US Patent Application Publication 2004/0001631 A1 issued to Frane J. Camara et al ("Camara").

As per independent claim 23 Ellington teaches:

A metadata association processor operable to regenerate a quasi-unique reference from audio/video material(column 5, lines 34-36 transfer image to a different device and column 5, lines 44-47 and column 5, lines 44-47, image file includes a quasi-unique value (hash value)), the quasi-unique reference being regenerated in accordance with a predetermined relationship of data values from predetermined parts of the audio/video material, the predetermined relationship being the same as a predetermined relationship which was used by a metadata generation processor to generate an original quasi-unique reference from corresponding parts of the audio/video material and to generate metadata describing the content and/or attributes of the audio/video material(column 5, lines 49-52), wherein the metadata association processor is operable to search the metadata for a match between the original quasi-unique

Art Unit: 2167

reference and the regenerated quasi-unique reference value(column 5, lines 52-55, search and match).

Ellington does not explicitly teach to associate the metadata stored in association with the original quasi-unique reference with the audio/video material from which material the regenerated quasi-unique reference was produced. Camara does teach this limitation (paragraph 47) to organize large quantities of image files (paragraph 3, lines 13-14). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ellington with to associate the metadata stored in association with the original quasi-unique reference with the audio/video material from which material the regenerated quasi-unique reference was produced (paragraph 47) to organize large quantities of image files (paragraph 3, lines 13-14).

As per independent claim 24 Ellington teaches:

An ingestion processor comprising an audio/video material reproduction device operable to receive a data carrier bearing audio/video material and to reproduce the audio/video material from the data carrier (column 5, lines 34-36 transfer image to a different device and column 5, lines 44-47), and a metadata ingestion processor operable to receive metadata describing the content of the audio/video material, the metadata including an original quasi-unique reference value generated from the audio/video material in a accordance with a predetermined relationship with the material (column 5, lines 44-47, image file includes a quasi-unique value (hash value)), and a metadata association processor operable to regenerate the quasi-unique reference from

the audio/video material, the quasi-unique reference being regenerated in accordance with the predetermined relationship of data values from the predetermined parts of the audio/video material (column 5, lines 49-52), wherein the metadata association processor is operable to search the metadata for a match between the original quasi-unique reference and the regenerated quasi-unique reference value (column 5, lines 52-55, search and match).

Ellington does not explicitly teach to associate the metadata stored in association with the original quasi-unique reference with the audio/video material from which material the regenerated quasi-unique reference was produced. Camara does teach this limitation (paragraph 47) to organize large quantities of image files (paragraph 3, lines 13-14). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ellington with to associate the metadata stored in association with the original quasi-unique reference with the audio/video material from which material the regenerated quasi-unique reference was produced (paragraph 47) to organize large quantities of image files (paragraph 3, lines 13-14).

As per claim 25 same as claim argument above and Ellington teaches:
wherein the metadata association processor includes a hashing processor operable to regenerate the quasi-unique reference from the audio/video material, the original and the regenerated quasi-unique reference being hash values (column 5, lines 44-54).

Art Unit: 2167

As per independent claim 31 Ellington teaches:

regenerating a quasi-unique reference from audio/video material, the quasi-unique reference being regenerated in accordance with a predetermined relationship of data values from predetermined parts of the audio/video material, the predetermined relationship being the same as a predetermined relationship used to generate an original quasi-unique reference from corresponding parts of the audio/video material and to generate metadata describing the content and/or attributes of the audio/video material(column 5, lines 34-36 transfer image to a different device and column 5, lines 44-47 and column 5, lines 44-55, image file includes a quasi-unique value (hash value) and re-computing value,), searching the metadata for a match between the original quasi-unique reference and the regenerated quasi-unique reference value(column 5, lines 52-55, search and match).

Ellington does not explicitly teach to associating the metadata stored in association with the original quasi-unique reference with the audio/video material from which material the regenerated quasi-unique reference was produced. Camara does teach this limitation (paragraph 47) to organize large quantities of image files (paragraph 3, lines 13-14). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ellington with to associate the metadata stored in association with the original quasi-unique reference with the audio/video material from which material the regenerated quasi-unique reference was produced (paragraph 47) to organize large quantities of image files (paragraph 3, lines 13-14).

Art Unit: 2167

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Number 7,043,048 issued to Eric E. Ellington ("Ellington") in view of US Patent Application Publication 2004/0001631 A1 issued to Frane J. Camara et al ("Camara") and further in view of US Patent Number 6, 738,100 issued to Arun Hampapur ("Hampapur").

As per claim 26 same as claim arguments above and Ellington teaches to identify a change (column 5, lines 44-50) . Ellington and Camara do not explicitly teach ... operable to identify a scene change ... Hampapur does teach this limitation (column 3, lines 39-49, scene changes) to identify key frames of a video (column 3, lines 8-10). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ellington and Camara with scene changes to identify key frames of a video (column 3, lines 8-10).

Contact Information


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan Rayyan whose telephone number is (571) 272-1675. The examiner can normally be reached M-F: 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Susan Rayyan

August 11, 2006


JOHN COTTINGHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100